



Quarterly Journal of

Applied Theories of Economics

University of Tabriz, Faculty of Economics, Management and Business

ISSN (P): 2423-6578

ISSN (O): 2423-6586

Vol. 4, No. 3, Autumn 2017

❖ **Endogeneity in Estimating the Child Labor Model with Censored Data: An IV-TOBIT Approach**
Sahand Ebrahimpour Faez; Zahra Karimi Moughari; Teimour Mohammadi

❖ **The Role of Indirect Environmental Taxation in Endogenous Growth Model on Environmental Quality in Iran**
Parviz Rostamzadeh; Shohreh Nasirabadi

❖ **The Effect of Political Institutions on Iranian Export to Major Trading Partners in Different Commodities Groups**
Shekoofe Nagheli; Majid Maddah

❖ **The Economic Factors Affecting Internet Diffusion in Iran Using the Fuzzy Regression**
Behzad Salmani; Hamid Zolghadr; Mostafa Shokri

❖ **Evaluating the Effects of Real Interest Rate and Reserve Requirements on the Selected Macro Variables of the Iranian Economy**
Shahnaz Haji Ghasemi; Mehdi Nejati; Nuraallah Salehi Asfeji

❖ **Modeling Factors Influencing Inflation Rate in Iran's Economy Using Firefly and Cuckoo Algorithm**
Hossein Akbari Fard; Amin Ghasemi Nejad; Maryam Rezaee Jafari

❖ **The Asymmetric Effect of Inflation on the Budget Deficit in Iran: Quantile Regression Approach**
Zeinab Baradaran Khanian; Hossein Asgharpur; Hossein Panahi; Alireza Kazerooni

❖ **Effect of Exchange Rate and Exchange Rate Uncertainty on Domestic Consumption in Iran**
Seyed Jamaledin Mohseni Zonouzi; Soleiman Feizi; Akram Mosavi

In the Name of God

Quarterly Journal of
Applied Theories of Economics

University of Tabriz
Faculty of Economics, Management and
Business

Vol. 4, No. 3, **Autumn** 2017

Quarterly Journal of Applied Theories of Economics

Proprietor: University of Tabriz

Managing Director: Hossein Panahi, Associate Professor, University of Tabriz

Editor in Chief: Mohammad Ali Motafakker Azad, Professor, University of Tabriz

Internal Director:

Mohsen Pourebadollahan Covich, Associate Professor, University of Tabriz

Executive Director: Sakineh Sojoodi

Editorial Board:

Ahmad Asadzadeh, Associate Professor, University of Tabriz

Karim Eslamloueyan, Associate Professor, Shiraz University

Ali Asghar Banouei, Associate Professor, Allameh Tabatabaei University

Davud Behbudi, Professor, University of Tabriz

Hossein Panahi, Associate Professor, University of Tabriz

Jaafar Haghighat, Professor, University of Tabriz

Hassan Heidari, Associate Professor, Urmia University

Saeed Rasekhi, Professor, University of Mazandaran

Behzad Salmani, Associate Professor, University of Tabriz

Alireza Shakibae, Associate Professor, Shahid Bahonar University

Kiumars Shahbazi, Associate Professor, Urmia University

Seyyed Kamal Sadeghi, Associate Professor, University of Tabriz

Nasser Sanoubar, Associate Professor, University of Tabriz

Ghahreman Abdoli, Associate Professor, University of Tehran

Mohammad Hassan Fotros, Professor, Bu-Ali Sina University

Mohammad Ali Fallahi, Professor, Ferdowsi University of Mashhad

Seyyed Alireza Kazerooni, Professor, University of Tabriz

Mohammad Ali Motafakker Azad, Professor, University of Tabriz

Parviz Mohammadzadeh, Associate Professor, University of Tabriz

Zahra Nasrollahi, Associate Professor, Yazd University

Address: Faculty of Economics, Business and Management; University of Tabriz; 29 Bahman Boulevard; Tabriz; Iran.

Postal Code: 5166616471

Tel: (+9841) 33392360

Fax: (+9841) 33392352

Website: ecoj.tabrizu.ac.ir **Email:** tuaesj@gmail.com

Contents:

- **Endogeneity in Estimating the Child Labor Model with Censored Data: An IV-TOBIT Approach**
Sahand Ebrahimpour Faez; Zahra Karimi Moughari; Teimour Mohammadi1
- **The Role of Indirect Environmental Taxation in Endogenous Growth Model on Environmental Quality in Iran**
Parviz Rostamzadeh; Shohreh Nasirabadi.....2
- **The Effect of Political Institutions on Iranian Export to Major Trading Partners in Different Commodities Groups**
Shekoofe Nagheli; Majid Maddah.....3
- **The Economic Factors Affecting Internet Diffusion in Iran Using the Fuzzy Regression**
Behzad Salmani; Hamid Zolghadr; Mostafa Shokri.....4
- **Evaluating the Effects of Real Interest Rate and Reserve Requirements on the Selected Macro Variables of the Iranian Economy**
Shahnaz Haji Ghasemi; Mehdi Nejati; Nuraallah Salehi Asfeji....5
- **Modeling Factors Influencing Inflation Rate in Iran's Economy Using Firefly and Cuckoo Algorithm**
Hossein Akbari Fard; Amin Ghasemi Nejad; Maryam Rezaee Jafari.....6
- **The Asymmetric Effect of Inflation on the Budget Deficit in Iran: Quantile Regression Approach**
Zeinab Baradaran Khanian; Hossein Asgharpur; Hossein Panahi; Alireza Kazerooni.....7
- **Effect of Exchange Rate and Exchange Rate Uncertainty on Domestic Consumption in Iran**
Seyed Jamaledin Mohseni Zonouzi; Soleiman Feizi; Akram Mosavi8

Endogeneity in Estimating the Child Labor Model with Censored Data: An IV-TOBIT Approach

Sahand Ebrahimpour Faez¹
Zahra Karimi Moughari (Ph.D)²
Teimour Mohamadi (Ph.D)³

Received: 2017/05/15 Accepted: 2017/07/08

Abstract

In the decent work literature abolishing child labor is one of the main elements of rights at work. According to the convention 138 of the International Labor Organization any form of work that harms physical mental or moral wellbeing of the child or threatens the child's morality is considered child labor and must not be done by any children less than 18 years of age. However in many developing countries due to extreme poverty and unfavorable labor market conditions a considerable number of households are obligated to be content with their children's participation in the labor market. In this paper the effects of the household's characteristics on the probability and the amount of child labor is studied. In order to do so the characteristics of the child mother head of the household and the household are considered as the explaining variables. The model applied in this study is an IV-TOBIT regression model. The child's participation in income yielding activities for the household results in an endogeneity bias in the TOBIT model. Therefore the head of the household's net income is used as an Instrumental Variable. The data in this study are extracted from the Households' Income-Expenditure Survey of the year 2013. The group under study are the children between 6 and 18 years of age. Near 25 thousand children were studied. According to the results being male has a significant positive effect on the increase in the hours of work done by a child and its probability. Furthermore the head's activity status and employment status and higher education levels of the mother decrease child labor.

Keywords: *Child labor, Censored data, Instrumental variables, Tobit regressions.*

JEL Classification: C34, I31, J83.

¹ PhD Candidate in Econometrics, University of Mazandaran, s.ebrahimi@stu.umz.ac.ir

² Associate Professor of Economics, University of Mazandaran, zakrami@umz.ac.ir

³ Associate Professor of Economics, Alameh Tabatabaie University, atmahmadi@gmail.com

The Role of Indirect Environmental Taxation in Endogenous Growth Model on Environmental Quality in Iran

Parviz Rostamzadeh (Ph.D.)¹

Shohreh Nasirabadi²

Accepted: 2017/06/21 Received: 2016/10/08

Abstract

The aim of this paper is study the role of indirect environmental taxation in endogenous growth model on environmental quality in Iran. For doing so, has used simulation of three section economic model and definition environmental quality function and the optimal level of variable in general equilibrium model determined and used a calibration method to studding the role of taxation on capital gains. The result showed that capital gain tax reduces consumption and capital. Increase capital gain tax rate increases government tax revenue and provide compensation of pollution, thus increasing the quality of environment. It should be note that the flow of capital is effective on change the quality of the environment. The results suggest that increase in capital in order to increase the environmental technologies is because it coincides with increase in the quality of the environment, decrease the capital. Therefore, the positive and negative effects of taxes should be considered with a comprehensive view in order not to reduce the quality of the environment and not create disorder in the economic system.

Keywords: *Capital gain tax, Environmental quality, General equilibrium model, Growth model.*

JEL Classification: *D50, H21, Q50.*

¹ Assistant Professor of Economics, Shiraz University, parvizrostamzadeh@shirazu.ac.ir

² M.A. in Economics, Shiraz University, sh.nassirabadi@gmail.com

The Effect of Political Institutions on Iranian Export to Major Trading Partners in Different Commodities Groups

Shekoofe Nagheli¹
Majid Maddah (Ph.D.)²

Received: 2017/03/05 Accepted: 2017/10/28

Abstract

Trade and export development policies have great importance in countries' economic development and financing. According to new international trade theories, export is a function of price and non-price variables. Among the non-price variables that have recently attracted the attention of institutionalized economists, the variables of political institutions by reducing transaction costs in trade, provides an appropriate field for further export development. The purpose of this paper is to investigate the empirical analysis of the effect of political institutions on Iranian export to major West Asian trading partners in the framework of the gravity model using the panel data method which six-digit data based on the harmonized system classification (HS) is used during 2009 to 2014. The results of estimated models show that institutional variables (political) along with indicators of economic freedom and financial freedom have a positive effect on Iranian export to West Asian trading partners in eight commodities different groups that is confirmed in high level of significance. Improvement of institutional variables by reducing business risk, motivating economic activists provides entry to world markets and is considered as an important step forward in export development.

Keywords: *Political institutions, Export, Gravity model, Panel data.*

JEL Classification: *C23, C29, F10, O43.*

¹ Ph.D. Candidate in Economics, Semnan University, sh.nagheli@semnan.ac.ir

² Associate Professor of Economics, Semnan University, majid.maddah@semnan.ac.ir

The Economic Factors Affecting Internet Diffusion in Iran Using the Fuzzy Regression

Behzad Salmani (Ph.D.)¹

Hamid Zolghadr²

Mostafa Shokri³

Accepted: 2016/12/19 Received: 2016/06/20

Abstract

Internet by creating new conditions and opportunities for economic growth, allows the less developed countries to reduce their deep economic gap with developed countries. The purpose of this study is to investigate the effects of economic factors on the internet diffusion in Iran over the period of 1994-2015. Using a fuzzy regression, this study is going to estimate the type of relationship between variables which estimates a range of possible values of parameters. Results of the model show that, per capita income, urbanization rate, openness, human capital, and share of the service sector in GDP have a positive effect on the internet diffusion. But the impact of agriculture sector's share in GDP is negative on the internet diffusion.

Keyword: *Economic factors, Fuzzy regression, Internet diffusion, Per capita income.*

JEL: *E23, C20, O10, O3.*

¹ Professor of Economics, University of Tabriz, behsalmani@gmail.com

² Ph.D. Student in Economics, University of Tabriz, Hamidzolghadr10@gmail.com

³ Ph.D. Student in Economics, University of Tabriz, mostafashokri98@gmail.com

Evaluating the Effects of Real Interest Rate and Reserve Requirements on the Selected Macro Variables of the Iranian Economy

Shahnaz Haji Ghasemi¹

Mehdi Nejati (Ph.D.)²

Nuraallah Salehi Asfeji (Ph.D.)³

Accepted: 2017/09/02 Received: 2017/05/15

Abstract

The association between monetary policy and real economic variables has always been among the economist's major topics of discussion. Depending on the economic situation of Iran, Monetary authorities draw on monetary policy so that they are affected by real economic variables. As a means of monetary policy, interest rate and reserve requirements affect macroeconomic variables significantly. Considering the fact that unemployment, inflation and the lack of sustainable and desirable economic growth have been among the major economic problems of Iran over the past few years, this study uses the simultaneous equation system and adopts generalized method of moments (GMM), in order to analyze the effects of the selected macroeconomic variables of Iran (e.g. inflation, unemployment and economic growth) during the period 1983-2015. The results suggested that the increase in real interest rate is followed by lower GDP, inflation and unemployment, while the increase in reserve requirements results in lower inflation, but higher GDP.

Keywords: Real interest rate, Reserve requirement rate, Macroeconomic variables.

JEL Classification: E43, E58, E51.

¹ M.A. Student in Economics, Shahid Bahonar University, shahnaz.hajighasemi@yahoo.com

² Assistant Professor of Economics, Shahid Bahonar University, mehdi.nejati@gmail.com

³ Assistant Professor of Economics, Shahid Bahonar University, salehinoor@gmail.com

Modeling Factors Influencing Inflation Rate in Iran's Economy Using Firefly and Cuckoo Algorithm

Hossein Akbari Fard (Ph.D.)¹

Amin Ghasemi Nejad²

Maryam Rezaee Jafari³

Received: 2017/03/05 Accepted: 2017/08/03

Abstract

Inflation, as one of the economic phenomena, causes many negative social and cultural consequences such as poverty, disproportionate distribution of income and the spread of financial distress, which in turn imposes significant costs on the economy. For this reason, price stability is considered as the main goal of economic planning and policy in all countries. Therefore, it is important to study and predict this macroeconomic variable. In this regard, various predictive models have been developed in competition with each other. One of these methods is evolutionary algorithms, which is a new method for modeling and predicting various phenomena. In the present study, using the Firefly and Cuckoo algorithm, and employing variables that affect inflation, including liquidity, exchange rate, real interest rate, expected inflation and industrial output during the period of 1975-2015, we attempt to model inflation linearly and non-linearly. The results show that the nonlinear model is more suitable for inflation modeling, and the Firefly algorithm is better than Cuckoo algorithm. According to the precision of the non-linear model developed by Firefly algorithm, it can be used to forecast inflation in the future.

Keywords: Modeling, Inflation rate, Firefly algorithm, Cuckoo algorithm.

JEL Classification: C54, E31, E37.

¹ Assistant Professor of Economics, Shahid Bahonar University, akbari45@gmail.com

² M.A. in Economics, Shahid Bahonar University, Amin.ghasemieco@gmail.com

³ M.A. in Economics, Shahid Bahonar University, m.rezaeejafari@gmail.com

The Asymmetric Effect of Inflation on the Budget Deficit in Iran: Quantile Regression Approach

Zeinab Baradaran Khanian¹

Hossein Asgharpur (Ph.D.)²

Hossein Panahi (Ph.D.)³

Alireza Kazerooni (Ph.D.)⁴

Received: 2016/07/17 Accepted: 2016/10/24

Abstract

Inflation affects budget deficit on both revenue and expenditure sides. Understanding the effect of inflation on the government's budget deficit can provide conditions for controlling inflation and reducing the budget deficit. Using of seasonal data over the period of 1991:2-2015:1, this study investigates the effect of inflation on budget deficit in Iran. For this purpose, the research model has been estimated in different percentiles using a quantile regression. The results indicate that, as inflation rises, the budget deficits decreased. In the other words Patinkins effect dominants of Tanzis effect. In fact, the result shows that although inflation reduces the real expense and revenues of government, but it is reducing government expense more than government revenues and as a result increasing inflation caused to reducing of the budget deficit. The results of the research show, in primary percentiles, the effect of inflation on the deficit is more than on intermediate percentiles. This means that there is a non-linear relationship between inflation and budget deficits. With the implementation of resampling (bootstrap), the results of quantile regression are confirmed.

Keywords: *Budget deficit, Inflation, Non-linear relationship, Quantile regression, Bootstrap.*

JEL Classification: *C22, E31, E62.*

¹ M.A. in Economics, University of Tabriz, zeinab.baradaran@yahoo.com

² Associate Professor of Economics, University of Tabriz, asgharpurh@gmail.com

³ Associate Professor of Economics, University of Tabriz, panahi@tabrizu.ac.ir

⁴ Professor of Economics, University of Tabriz, ar.kazerooni@yahoo.com

Effect of Exchange Rate and Exchange Rate Uncertainty on Domestic Consumption of Iran

Seyed Jamaledin Mohseni Zonouzi (Ph.D.)¹

Soleiman feizi²

Akram Mosavi³

Received: 2017/03/11 Accepted: 2017/08/19

Abstract

The main objective of this study is to investigate the effect of exchange rate and exchange rate uncertainty on domestic consumption in Iran during 1988q2-2015q1. Therefore, GARCH method is used to estimate the exchange rate uncertainty and the Bonds test approach to ARDL models is used to analyze the existence of long-run relationship, and the Vector Error-Correction model is used to analyze the short-run deviations of variables from their long-run equilibrium values. The results indicate that the exchange rate has direct significant long run and short run effect on the consumption, but exchange rate uncertainty has indirect significant effect on the consumption in Iran. Positive relationship between exchange rate and consumption confirms the exchange rate path theory in Iran. Negative relationship between exchange rate uncertainty and consumption confirms absorption theory in Iran. The results suggest monetary authorities in Iran to adopt appropriate exchange policy for decreasing exchange rate uncertainties. Due to insignificant short run and significant long run effect of government expenditure on consumption, it is suggested to adopt managed government expenditure growth rate in mid-term program.

Keywords: *Aggregate consumption, Exchange rate uncertainty, Exchange rate, GARCH, ARDL.*

JEL Classification: *C22, E21, G12.*

¹ Assistant Professor of Economics, Urmia University, sj.mzonouzi@urmia.ac.ir

² Assistant Professor of Economics, Urmia University, feizy114@yahoo.com

³ M.A. in Economics, Urmia University, akram_mosavi@yahoo.com